ZOOLOGY.—*The Ostracoda of Great Slave Lake.* WILLIS L. TRESSLER, U. S. Navy Hydrographic Office.

(Received June 10, 1957)

The fresh-water Ostracoda of northern North America, including Canada, Alaska, and the Northwest Territories, are an almost unknown quantity. The present author lists only 29 species that have been reported from this region, out of a total number of species from North America of slightly over 200 (Tressler, in press). Of the 29 species reported from northern North America, only 2 have previously been reported from the Northwest Territories, and 5 from Alaska; the remainder are from Nova Scotia, New Brunswick, Ontario, Quebec, Newfoundland, Alberta, and Saskatchewan.

The first worker to mention ostracods in this part of the world appears to be Nicholson (1872, 1873), who reported ostracods ("*Cypris* sp.") as common on the muddy bottoms of Lake Ontario. Since then several workers have reported ostracod species from northern North America, namely, Alm, Bigelow, Cushman, Huntsman, Klugh, Sharpe, and Willey (see Johansen's annotated bibliography in Sars, 1926). G. O. Sars (1926) reported upon 16 species collected mainly from the area near Ottawa; 5 of these were new, and a sixth species (*Cypriconcha barbata* (Forbes)) was made the type of a new genus.

No investigation has been made previously of the ostracods of Great Slave Lake. The present paper reports on five species of bottom-dwelling forms, two of which appear to be new. The most abundant species, *Candona crogmaniana* Turner, was found in all parts of the lake at depths of 5 to 183 meters. *Candona decora* Furtos was also widely distributed on the lake bottom, although less abundant, and was the only ostracod present between depths of 183 and 600 meters. The large *Cypriconcha barbata* (Forbes) was found at Yellowknife and off Slave Point on the western shore of the main lake in shallow water. Other shallow-water forms were *Candona rawsoni*, found in the main portion of the lake, and *Limnocythere oughtoni*, found only in the shallow water near the Talston River and Preble Island.

The material from which the present report was prepared consisted of a large number of collections made from all parts of the bottom of Great Slave Lake as a part of the intensive limnological and fishery investigation carried out from 1944 to 1947 by parties under Dr. D. S. Rawson of the University of Saskatchewan. Dr. Rawson forwarded the separated ostracods to the author for identification and in addition kindly permitted the use and inclusion in the present report of ecological and other information on Great Slave Lake, which are treated in detail in his two principal reports on the physical limnology and bottom fauna (Rawson, 1950, 1953). I am greatly indebted to Dr. Rawson for the opportunity of examining this material and for most of the information covered in the present paper under the headings of "Great Slave Lake" and "General Discussion."

The slides of the dissected specimens from which camera lucida drawings were made of the type specimens, have been deposited in the U. S. National Museum.

GREAT SLAVE LAKE

Great Slave Lake in the Northwest Territories is a very large, oligotrophic lake lying geologically between the Mackenzie lowlands and the Canadian pre-Cambrian shield. It is of recent origin, probably less than 10,000 years old. Five-sixths of its inflow comes from the Slave River, which drains an area of 234,000 square miles. The remainder of the inflow comes from local rivers, which add another 150,000 square miles to the drainage area. Great Slave Lake is the principal source of the Mackenzie River, which flows north to the Arctic Ocean.

The climate of the region in which the lake is located may be termed northern continental, with long, cold winters and short, warm summers; it has a low annual precipitation. The mean annual air temperature of the lake region is 23° F. Ice covers the lake for more than 5 months of the year. In

summer, the mean air temperature runs between 50° and 60° F. The long daylight hours during the summer months (15 to 19.5 hours) permit vigorous growth of vegetation. The permafrost line runs north of McLeod Bay, but there are also areas (or "islands") of permafrost scattered around the lake at Hay River, Resolution, and on the banks of the Slave River near Snowdrift. The margin of the continuous permafrost belt cuts across the lake from east to west.

Great Slave Lake is 275 miles long from Reliance, at the northern end of the east arm of the lake, to the Mackenzie River source at the southwest corner. It is 100 miles from Resolution to Fort Rae. The main lake occupies a region about 50 by 100 miles in extent. The shoreline of the main lake is fairly regular but the north and east arms of the lake have a very irregular shoreline, with complex topography caused by the pre-Cambrian areas in which they lie. The total length of the shoreline of the entire lake is about 1,900 miles, giving a shoreline development of 5 to 1 and indicating a high degree of shoreline irregularity. Sand beaches are common along the south shores, but there are few along the north shores of the lake. In the Yellowknife area there are many sloping, smooth, rocky shores, and in the east arm of the lake are many cliffs with few sand beaches. There are, however, some channels and well-protected bays with warmer water, which have rich humus bottoms and abundant aquatic plant growth. These areas make excellent environments for ostracods. The entire lake covers an area of 10,500 square miles, of which the main lake accounts for 7,500 square miles. The main lake is thus of about the same size as Lake Ontario. The mean depth of the main lake is 41 meters, with a maximum depth of 163 meters. The deepest area of the lake, however, is in Christie Bay (614 meters) in the east arm.

Surface temperatures of the lake water in summer average 14° C. offshore and 16° C. inshore. Bottom water temperatures in summer in the shallow water of the main lake, ranged from 14° C. late in July in the Inner Bay at Yellowknife to 3.4° C. at 37 meters depth 10 miles southwest of Hardisty Island late in June. In the deep water, temperatures range from 4.0° to 4.8° C. at 100 meters; 3.7° to 3.8° C. at 300 meters; and 3.6° to 3.7° C. at 575 meters.

Oxygen is abundant at all depths, and although there is some decrease in the hypolimnion during summer, the saturation never is below 82 percent. Hydrogen-ion concentration ranges from pH 7.7 to 8.3 in most of the lake except in McLeod Bay, which is slightly acid and has a pH of between 6.6 and 6.9. Dissolved materials in the main lake average 150 p.p.m., with calcium and bicarbonates predominating, but are much lower in McLeod Bay (22 p.p.m.). Transparency, as measured by Secchi disc, ranges from 0.1 to 1.0 meters in the Slave Delta, to 4 to 13 meters in Christie Bay, and 10 to 17 meters in McLeod Bay. The transparency at the inshore stations in the main lake ranged from 0.1 to 5.3 meters.

Great Slave Lake is thus a cold water, highly oligotrophic lake, with the McLeod Bay portion reaching extremes of oligotrophy, which is borne out by its low mineral content, great transparency, and poor plankton productivity. The extreme youth of the lake, together with climatic, morphometric, and edaphic factors which influence its oligotrophy make this lake an extremely interesting subject of study. In his study of the fish population of Great Slave Lake, Dr. Rawson (1951) found that it compared favorably with that of the northern Great Lakes. Only two species of fishes, however, were found to have ostracods as part of their stomach contents (Rawson, 1953).

GENERAL DISCUSSION

In his report on the bottom fauna of Great Slave Lake, Rawson (1953) discusses this fauna in relation to morphometric and edaphic factors and compares it with that of other large lakes of the north. As a result of more than 600 dredgings made during this survey, more than 1,700 ostracods were obtained. The total ostracod population averaged 57 individuals per square meter of bottom surface, with a range of from 4 to 152 per square meter, depending upon depth.

The greatest number of ostracods was found at between 40 and 50 meters depth, where the average was 152 per square meter. The smallest concentration of ostracods occurred in shallow water. Also, below 50 meters depth the average declined to about 25 individuals per square meter. Throughout the entire area of Great Slave Lake, ostracods made up 3.5 percent of the total number of bottom organisms collected. Broken down into the five main lake regions, the results were as follows: in the main part of the lake, 3.8 percent; in Yellowknife Bay, 3.4 percent; in the Islands, 4.2 percent; in Christie and Wildbread Bays, 0.7 percent; and 5 percent in McLeod Bay.

In the deepest part of the lake (Christie Bay) only one species of ostracod (*Candona decora* Furtos) was found, and this was also true of the other groups of the bottom fauna such as the amphipods, nematodes, oligochaetes, chironomids, and sphaeriids, which were represented by one species each. The bottom sediments in the deepest part of the lake were composed of "fine-grained grey clay of creamy consistency at the surface and stiffer below" (Rawson, 1953) with only minute amounts of organic material in the surface layer. The sediments were composed of very few particles of sand size and larger, while silt, with particles 0.01 to 0.1 mm in diameter made up 2 percent, clay particles of 0.001 to 0.01 mm diameter 40 percent, and the remaining 58 percent was composed of clay particles of less diameter than 0.001 mm.

The Slave River empties into the lake near Resolution and carries a tremendous load of sediment out over its delta. The bottom population of the delta was carefully studied by Rawson (1953), who found it to be highly favorable for oligochaetes and nematodes, but all other groups of bottom organisms were scarcer here than in other parts of the lake. The ostracods were about one-third as numerous here than elsewhere, and this is probably caused by the shifting sediments of the delta which formed an unfavorable environment for them.

Ostracods were found in the stomachs of only two of the 12 species of fishes examined, namely, the common whitefish (*Coregonus clupeaformis*) and the cisco (*Leucichthys* spp.) (Rawson 1951).

The bottom fauna of Great Slave Lake compared favorably in quantity with that of the other great lakes of the northwest (Winnipeg, Reindeer, Athabaska, and Great Bear Lakes). These are all large oligotrophic lakes dominated by the amphipod *Pontoporeia*. Although the ostracod fauna of these lakes is unknown, a similar pattern to that found in Great Slave Lake would be expected of them in such large oligotrophic lakes, where morphometric factors are dominant in determining the production of bottom fauna.

There are a comparatively small number of ostracod species present in Great Slave Lake; only five species were collected from the entire series of over 600 samples. Of these the most abundant and widely distributed was *Candona crogmaniana* Forbes, 1893, which was found pretty much over the entire lake in water as deep as 183 meters, but which was absent from the areas of greatest depth. *Candona decora* Furtos, 1933, while not so numerous in individuals as the previous species, was equally well distributed and was the only ostracod found in the deepest portions of the lake (Christie Bay). A new species of *Candona*, which is described for the first time in this report, was found only in the main portion of the lake at depths of 11 to 37 meters. The large ostracod *Cypriconcha barbata* (Forbes, 1893) was found only in two locations in the lake (Yellowknife Bay and off Slave Point). The fifth species found in Great Slave Lake, also described as new in this report, was collected in shallow water in two locations near the junction of the main part of the lake and the Islands portion, off the mouth of the Talston River, and near Preble Island.

The scarcity of species, together with the large number of individuals, is characteristic of the colder regions, and is in marked contrast with tropical and subtropical realms where there are enormous numbers of species with comparatively few individuals. The bottom fauna of Great Slave Lake offers an excellent illustration of this well-established observation.

TAXONOMY

Suborder Podocopa

Family Cypridae

Subfamily Candocyprinae

Genus **Candona** Baird, 1845

This genus contains many species, most of which can be identified only from a close examination of the internal anatomy. The shape of the shell is generally ovoid, with a smooth surface and is more or less finely haired. The eye is usually not well developed and is often entirely lacking. The color of the shell is white or creamy. The anterior antennae are 5-segmented. The posterior antennae are without natatory setae. The penultimate segment of the mandibular palp is short and stout. The palp of the maxillary process has a terminal segment which is broader than long. The third thoracic leg is 4-segmented but frequently appears to be 5-segmented because of an incomplete division of the penultimate segment, which has one terminal seta: terminal segment with three unequal setae, one of which is much smaller than the others. The furcal ramus is well-developed with two claws and one or two setae. In the male the penis is prominent and has one lateral and one, or sometimes more, terminal lobes. The ejaculatory duct has five whorls of spines. All known species of this genus are confined to the northern hemisphere.

Candona decora Furtos, 1933

Figs. 3, 4

Candona candida (part); Brady and Norman, Sci. Trans. Royal Dublin Soc., ser 2, **4**: 99, pl. 10, figs. 20–23. 1889.

Candona decora Furtos, Ohio Biol. Surv. **5**(6): 477, pl. 7, figs. 3–5; pl. 9, figs. 21–22; pl. 11, figs. 5–6. 1933.

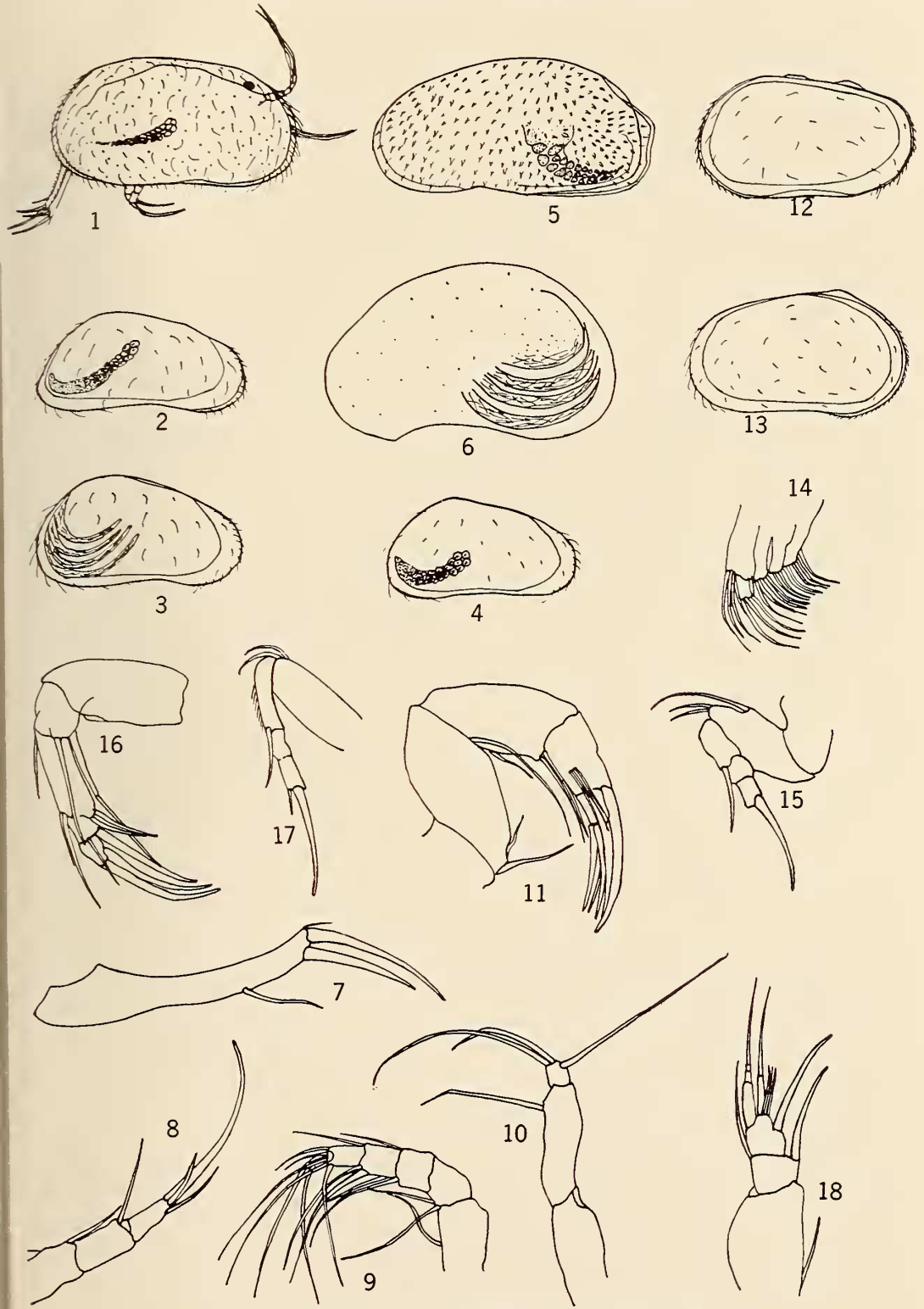
Candona decora, Tressler (in press) Ostracoda, Ward and Whipple's "Freshwater Biology," ed. 2.

Specific characters.—Female: Seen from the side: elongated, height less than one-half the length, highest in the posterior third; anterior end broadly rounded, posterior end truncated; anterior slope of dorsal margin gently arched, with an anterior and medial sinuation, posterior slope straight; ventral margin with a slight sinuation. Seen from above: shape elliptical, width less than one-half the length; left valve projects beyond right at anterior and posterior ends. Surface of valves smooth and faintly reticulated in the posterior region. Valves are sparsely hairy. Penultimate segment of third thoracic leg divided, terminal segment slightly longer than broad and with shortest distal seta three and one-half times longer than the terminal segment. Furca curved and sixteen times as long as the narrowest width of the ramus; dorsal seta three-fourths as long as the subterminal claw; terminal claw less than one-half as long as the ramus: terminal seta one-fourth the length of the terminal claw. Length of female 1.15–1.25 mm, height 0.62–0.69 mm. Color white.

Male: Larger than female with shell of a different shape, with a much sinuated ventral margin and a narrower anterior end. Posterior end broadly truncated. Prehensile palps unlike each other, one being much narrower. Furca straight and about eighteen times the length of the narrowest part of the ramus; much narrower beyond the dorsal seta. Length of male 1.45 mm, height 0.75 mm.

Occurrence.—This species was widely distributed in Great Slave Lake at depths of between 12 and 600 meters, during June, July, and August. It was the only ostracod found between 500 and 600 meters in Christie Bay. In the main lake it was taken in Yellowknife Bay (14–16 meters), between Mirage Islands and Gypsum Point (48 meters), 10 miles off Gypsum Point (96 meters), between Mirage Islands and the Resolution Delta (105 meters), in Resolution Bay (11 meters) near Burnt Island (11 meters), off Caribou Island (14 meters), between Jones Point and Resolution (58 meters), off the mouth of Big Buffalo River (14 meters), and between Slave Point and Big Buffalo River (12–25 meters). In the east arm of the lake this species was found south-southeast of Wilson Island (22 meters),

Figs. 1–18.—1, *Cypriconcha barbata* (Forbes): Lateral view of entire animal, female. 2, *Candona crogmaniana* Turner: Lateral view of right valve, female. 3, 4, *Candona decora* Furtos: 3, Lateral view of right valve, male; 4, lateral view of right valve, female. 5–11, *Candona rawsoni*, n. sp.: 5, Lateral view of entire animal, female; 6, lateral view of left valve, male; 7, furca, female; 8, second thoracic leg, female; 9, first antenna, female; 10, third thoracic leg, female; 11, second antenna, female. 12–18, *Limnocythere oughtoni*, n. sp.: 12, Lateral view of left valve, female; 13, lateral view of right valve, female; 14, maxillary palp, female; 15, first thoracic leg, female; 16, second antenna, female; 17, second thoracic leg, female; 18, first antenna, female.



FIGS. 1–18.—(For explanation see opposite page).

in Christie Bay (500–600 meters), and east of Isles du Large (15 meters).

Distribution.—Great Britain, Ohio, Massachusetts, Michigan, in ponds and lakes.

Remarks.—This species was described from Ohio by Furtos (1933) and has been reported by the same author from Massachusetts. The present author has identified it from Michigan as well. It was found in early spring in Ohio and apparently prefers cool water, as its wide distribution in Great Slave Lake confirms.

Candona crogmaniana Turner, 1894

Fig. 2

Candona crogmaniana Turner, Bull. Sci. Lab. Univ. **8**(2): 20, pl. 8, figs. 24–33. 1894.
Candona crogmani Sharpe, Ostracoda, Ward and Whipple's "Freshwater Biology," p. 824. 1918.
Candona crogmaniana, Müller, Ostracoda, Das Tierreich: 144. 1912.
Candona crogmaniana, Furtos, Bull. Ohio Biol. Surv. **5**(6): 476, pl. 8, figs. 1–3; pl. 9, figs. 17–18; pl. 11, figs. 9–10, 1933.
Candona crogmaniana, Tressler (in press), Ostracoda, Ward and Whipple's "Freshwater Biology," ed. 2.

Specific characters.—Female: Seen from the side, elongated, height less than one-half the length, highest in the posterior third of the body: anterior end broadly rounded, the posterior end narrower. Anterior slope of dorsal margin gently arched with an anterior sinuation; posterior slope much steeper. Ventral margin sinuated. Seen from above, the valves are compressed, width about two-fifths the length, both extremities pointed, the posterior end more pointed than the anterior. The left valve extends past the right valve at the posterior end. Surface of valves smooth and with few hairs. The eye is well developed for the genus *Candona* and is of a black color. Penultimate segment of the third thoracic leg divided; terminal segment with the shortest seta four times the length of the segment. Furca 19 times as long as the narrowest width of the ramus: dorsal seta as long as the subterminal claw; terminal claw one-half as long as the ramus; terminal seta one-fourth the length of the terminal claw. Length of female 1.48 mm, height 0.68 mm, width 0.60 mm. Color whitish gray.

Male: Larger than the female and much higher, with a strongly arched dorsal margin. Posterior end very broadly rounded. Prehensile palps unlike, one stout, the other longer and considerably narrower. Length of male 1.50 mm, height 0.75 mm, width 0.65 mm.

Occurrence.—A great many individuals of this easily recognized species were collected from various parts of Great Slave Lake during June, July, and August, at depths from 5 to 183 meters. The deepest place at which this form was found was off Goulet Bay. In the main lake it was also taken at Yellowknife Bay (5–25 meters), in the inner bay at Yellowknife (7–13 meters), between Redrock Point and West Mirage Island (22–69 meters), south of East Mirage Island (30 meters) between Yellowknife Bay and Gypsum Point (86 meters), between Gros Cap and Hardisty Island (31–140 meters), off Gros Cap (72 meters), near the Outpost Islands (25–65 meters), between Goulet and Egg islands (16–27 meters), near Goulet Island (14–37 meters), at several places in Resolution Bay (5–7 meters), near Egg Island (11–25 meters), and between Egg and Hardisty islands (25–45 meters). In the east arm of the lake it was found at Francois Bay (15 meters), south-southeast of Wilson Island (24 meters), off Pearson Point (17 meters), in Portage Inlet (19 meters), in Wildbread Bay (63–104 meters), and east of the Isles du Large (15–34 meters), at the western extremity of the "Islands Area."

Distribution.—Georgia, Illinois, Wisconsin, Michigan, New York, and as a fossil in post-Tertiary beds in Kansas and New York.

Remarks.—This species was found in Ohio (Furtos, 1933) in permanent and temporary ponds in spring and in fall, and in a cool water hole the year around. Originally described from shallow water near Atlanta by Turner (1894), it has since been reported from such widely differing habitations as the bottom of Lake Mendota in Wisconsin and from the St. Lawrence River in New York (Tressler, in press). It is apparently widely distributed over North America, but seems to prefer cool water.

Candona rawsoni, n. sp.

Figs. 5–11

Specific characters.—Female: Seen from the side, elongated with greatest height at about the middle and amounting to one-half the length; dorsal margin rounded with a gentle anterior slope and a more steeply inclined posterior slope. The anterior ends of both valves are rounded; the posterior end of the left valve is much more

broadly rounded than the anterior end. The posterior end of the right valve is very dissimilar, ending in a truncated termination which extends beyond the end of the left valve posteriorly and ventrally. Ventral margin is sinuated anterior to the middle. Seen from above, the shells are moderately tumid. The surface of the shell is covered with short, thick, stiff hairs. First antenna 5-segmented. Second antenna short and thick. The penultimate segment of the third thoracic leg is not divided but is provided with one seta; terminal segment slightly longer than broad with the shortest seta four times the length of the segment; longest seta two times the length of the shortest. Furca curved and eleven times the narrowest width of the ramus; terminal claw about half the length of the ramus, subterminal claw three-fourths the length of the terminal claw; terminal seta one-eighth the length of the terminal claw; dorsal seta two-thirds the length of subterminal claw and removed from the base of the subterminal claw by the length of the dorsal seta. Length of female 1.19 mm, height 0.58 mm, Color brown.

Male. Somewhat larger than the female and with valves of a different shape. Valves much higher than one-half the length, highest at about the middle. Both ends are rounded but the posterior end is much more broadly rounded than the anterior. Dorsal margin broadly arched, ventral margin sinuated with a distinct corner in the anterior third. Spermatic vessels show through the valves conspicuously. Other internal structures are similar to the female. Length of male 1.26 mm, height 0.72 mm.

Occurrence.—This form was found only in the main part of the lake at comparatively shallow depths which ranged from 11 to 37 meters. Collections were made during June, July, and August. It was taken at Yellowknife Bay (20 meters), near the Outpost Islands (17 meters), in several places in Resolution Bay (11–25 meters), west of Egg Island toward Jones Point (20 meters), off the south shore of the lake (13 meters), and between the Talston River and Goulet Island (14–37 meters). Type locality, Resolution Bay. Holotype, female, U.S.N.M. 100870; male paratype, 100869.

Distribution.—Known only from Great Slave Lake.

Remarks.—This species, especially in the female, should be easily recognized from the peculiar truncation of the posterior part of the right valve which gives it a very distinctive appearance. As many males as females were collected, the two being associated together. I am happy to name this interesting species after Dr. D. S. Rawson of the University of Saskatchewan.

Subfamily Cyprinae

Genus **Cypriconcha** Sars, 1926

This genus is composed of large ostracods with valves covered with coarse hairs. The valves are rather thin and have unarmed edges. The antennae, although not well-developed, are well adapted for swimming. The masticatory lobes of the maxillae are rather narrow; the palp is produced and has a cylindrical distal joint. Furcal rami are long and slender, with the distal edge finely hairy. Ejaculatory tubes have numerous whorls of radiating spines.

Remarks.—This genus at present contains only three species: *C. barbata*, which is reported upon below; *C. alba* Dobbin (1941) from Washington; and *C. gigantea* Dobbin (1941) from Alaska. The genus was established in 1926 by G. O. Sars to include a large ostracod originally described by Forbes (1893) as "*Cypris barbata*" from Wyoming. Turner (1895) later referred it to the genus *Herpetocypris*, and this designation was also adopted by Sharpe (1918). It is, however, quite distinctly a separate genus and not referable to either of the two above mentioned genera because of differences in shell structure and appendages. Species of this genus have been reported only from cooler, northern regions.

Cypriconcha barbata (Forbes, 1893)

Fig. 1

Cypris barbata Forbes, Bull. U. S. Fish. Comm. 1893: 214, pl. 37, figs. 2, 3; pl. 38. 1893.

Herpetocypris barbata, Turner, Freshwater Ostracoda of the United States (Entomostraca of Minnesota): 316, pl. 77. 1895.

Herpetocypris barbata, Sharpe, Ostracoda, Ward and Whipple's "Freshwater Biology," p. 812. 1918.

Cypriconcha barbata, Sars, Rep. Canad. Arctic Exped., 1913–1918, **7**(1): Ostracoda, p. 5, pl. 2. 1926.

Cypriconcha barbata, Tressler (in press), Ostracoda, Ward and Whipple's "Freshwater Biology," ed. 2.

Specific characters.—Female: Seen from the side, shell elongate, height two-fifths the length, highest in posterior quarter of length; dorsal margin rather straight, sloping toward the an-

terior end; anterior end rounded; posterior slope dropping sharply at a 45° angle to the posterior end and forming a blunt angle with a broadly rounded corner. In the dorsal portion the posterior end is straight, but on the ventral portion it is rounded. Ventral margin weakly convex. Seen from above, width about two-fifths the length. Surface of valves smooth and covered with fine hairs. Natatory setae of second antennae extend to the middle of the terminal claws. Maxillary palp has two smooth spines. The first thoracic leg has a peculiarly shaped palp, the tip narrowing and curving over to one side. Furca long and narrow; 20 times as long as the narrowest width of the ramus; and S-shaped; posterior border with thick, short spines with longer spines at intervals; terminal claws about one-fifth the length of the ramus; terminal seta one-fifth length of terminal claw; dorsal seta one-sixth length of the terminal claw. Length of female 4.00 mm, height 2.00 mm, width 1.60 mm. Color dirty-yellowish brown with a reddish-brown patch on either side.

Male: Slightly smaller than female, of similar shape except that the height is equal to about one-half the length. Ventral margin distinctly sinuated in the anterior third and bowed in the posterior half. Seen from above, width equal to one-third the length, with both extremities pointed, the posterior end more pointed than the anterior. The appendages are similar to those of the female. Ejaculatory tubes are very large with a large number of fine radiating spines. Length of male 3.40 mm, height 1.70 mm. Color, same as female.

Occurrence.—A few specimens, both male and female, were found in shallow water ranging from 3 to 6 meters depth in Yellowknife Bay, in the inner bay at Yellowknife (1.7 meters), and between Slave Point and Brabant Island (5 meters), during July and August.

Distribution.—Wyoming, Alberta, in rivers and sloughs in June, July, and August.

Remarks.—*Cypriconcha barbata* is another cool-water species confined to the Northern Hemisphere. Originally described from female specimens taken in the cold waters of the Yellowstone River in Yellowstone National Park, Wyo. (Forbes, 1893), a solitary male specimen was collected in June 1920 by A. G. Huntsman in a slough, northeast of Medicine Hat, Alberta, and was described by G. O. Sars (1926). The present finding in Great Slave Lake is the only other known record of this large species.

Family Cytheridae
Subfamily Limnocytherinae
Genus **Limnocythere** Brady, 1867

This genus contains ostracods with thin shells of chitin and very little calcareous material. They have broad marginal zones, often reticulated valve surfaces and may or may not have tubercles, spines or furrows. The first antenna has an elongate terminal segment; two of the terminal setae are fused. The second antenna is 4-segmented; the flagellum is often bi-articulate. Masticatory process of maxilla is strongly developed with an indistinctly segmented palp. The thoracic legs are similar and slender; terminal claw of third leg is frequently elongated. The furcal ramus has a single terminal claw and one or two lateral setae.

Remarks.—This is the only fresh-water genus of the family Cytheridae. The genus *Limnocythere* contains forms that are either fresh-water or brackish water inhabitants but never entirely marine. The thoracic legs are never much differentiated as in the Cyprinae, and the exopodite of the second antenna, which is absent in this group, becomes a well-developed flagellum in the Cytheridae.

Limnocythere oughtoni, n. sp.
Figs. 12–18

Specific characters.—Female: Seen from the side, height about three-fifths the length, highest well forward of the middle. Anterior end broadly rounded, posterior end less rounded. Marginal zone of valves indistinct. Small dorsal and lateral protuberances present at the highest point and in the posterior third. One indistinct dorsolateral furrow present. Surface of valves smooth with no reticulations or sculpturing; valves are sparsely hairy. Second antenna with poorly developed bi-articulate flagellum reaching only slightly beyond the middle of the terminal claws. Legs are typical of the genus. Furca is pointed with a tapering spine and no papilla at the base of the seta. Length of female 0.90 mm, height 0.56 mm. Color grayish white.

Male: Unknown.

Occurence.—Seven female specimens of this species were collected in shallow water during

July off Preble Island (2–10 meters) and between the Talston River and Goulet Island (2–9 meters). Type locality, Goulet Island. Female holotype, U.S.N.M. 100871; female paratype 100872.

Distribution.—Known only at present from Great Slave Lake.

Remarks.—It is a pleasure to dedicate this species to Dr. J. G. Oughton, who was a member of the field party from 1944 to 1946 and who assisted in the work of separation of the bottom organisms for identification.

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HERPETOLOGY.—*A new name for the race-runner lizard of the Middle Atlantic States (Tejidae).* RICHARD L. HOFFMAN, Blacksburg, Va.

In a recent issue of this JOURNAL (**47:** 153. 1957) I proposed the name *Cnemidophorus sexlineatus oligoporus* for a population of the species occurring from Maryland to South Carolina. Subsequently Drs. R. G. Zweifel and Richard Etheridge kindly brought my attention to the fact that the subspecific name is preoccupied in the genus by the combination *Cnemidophorus deppei oligoporus* Smith (Publ. Field Mus. Nat. Hist., zool. ser., **24:** 26. 1939), proposed for a Mexican lizard.

A new name is thereby required for the designation of the northeastern subspecies of *sexlineatus*, and I suggest for it the combination **Cnemidophorus sexlineatus pauciporus,** this trinomial having the same denotation as its predecessor.